

SVENSK STANDARD

SS-EN ISO 13341:2010

Fastställt/Approved: 2010-10-07
Publicerad/Published: 2010-11-17
Utgåva/Edition: 2
Språk/Language: engelska/English
ICS: 23.020.30; 23.060.40

Gasflaskor – Montering av ventiler till gasflaskor (ISO 13341:2010)

Gas cylinders – Fitting of valves to gas cylinders (ISO 13341:2010)

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Denna standard ersätter SS-EN ISO 13341, utgåva 1 och SS-EN ISO 13341/AC:1998, utgåva 1.

The European Standard EN ISO 13341:2010 has the status of a Swedish Standard. This document contains the official version of EN ISO 13341:2010.

This standard supersedes the Swedish Standard SS-EN ISO 13341, edition 1 and SS-EN ISO 13341/AC:1998, edition 1.

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Denna standard är framtagen av kommittén för Gasflaskor, SIS/TK 296.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

EN ISO 13341

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2010

ICS 23.020.30

Supersedes EN ISO 13341:1997

English Version

Gas cylinders - Fitting of valves to gas cylinders (ISO 13341:2010)

Bouteilles à gaz - Montage des robinets sur les bouteilles à gaz (ISO 13341:2010)

Gasflaschen - Eindrehen von Ventilen in Gasflaschen (ISO 13341:2010)

This European Standard was approved by CEN on 25 September 2010.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 13341:2010) has been prepared by Technical Committee ISO/TC 58 "Gas cylinders" in collaboration with the Technical Committee CEN/TC 23 "Transportable gas cylinders" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2011, and conflicting national standards shall be withdrawn at the latest by April 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 13341:2010 has been approved by CEN as a EN ISO 13341:2010 without any modification.

Gas cylinders — Fitting of valves to gas cylinders

1 Scope

This International Standard specifies the procedures to be followed when connecting cylinder valves to gas cylinders. It specifically applies to all valve and cylinder combinations connected with ISO screw threads as specified in ISO 10920 and ISO 11363-1. It defines routines for inspection and preparation prior to valving for both taper and parallel screw threads.

Torque values are given in Annex A for steel and aluminium gas cylinders including composite cylinders with steel or aluminium boss.

NOTE The procedures and practices specified in this International Standard can be beneficially applied to other valve to cylinder screw thread connection systems. ISO/TR 11364^[4] lists the valve to gas cylinder threads in use worldwide. It gives details of the thread identification codes, whether the threads are interchangeable with ISO threads and if the taping procedure and torque values specified in this International Standard can be used. ISO/TR 11364^[4] gives clear guidance for the method and torque for all listed inlet threads, which are not interchangeable.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11114-2, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 2: Non-metallic materials*

ISO 11119-2, *Gas cylinders of composite construction — Specification and test methods — Part 2: Fully wrapped fibre reinforced composite gas cylinders with load-sharing metal liners*

ISO 11119-3, *Gas cylinders of composite construction — Specification and test methods — Part 3: Fully wrapped fibre reinforced composite gas cylinders with non-load-sharing metallic or non-metallic liners*

ISO 15245-1, *Gas cylinders — Parallel threads for connection of valves to gas cylinders — Part 1: Specification*

3 General requirements and recommendations

Gas cylinders and valves shall be connected so that when in use the combination is gas tight and the valve cannot be removed inadvertently from the cylinder.

The tools used to screw the valve into the gas cylinder shall fit the valve properly and the gas cylinder shall be secured against rotation during the torquing process. The tools shall not cause damage to either the valve or the cylinder. Minor marks to the valve and the cylinder are acceptable. The cylinder and the valving tool axes shall be aligned.

In addition, some composite cylinders need special treatment for the valving process, for example fixing the neck/metal boss during torquing.

Any special instructions given by the cylinder manufacturer shall be followed.

Sealing materials used between the valve stem and cylinder neck threads shall be compatible with the gas to be contained in the cylinder (e.g. oxygen), in accordance with ISO 11114-2.

Except as described in 7.3, the torque applied to the valve shall be within the relevant range given in Annex A. Valve manufacturers shall make available instructions if their specific recommendations regarding their product differ from those included in this International Standard (e.g. if their maximum torque recommendation is less than the maximum allowed in the relevant range included in Annex A).

For all threads, the maximum level of torque should not be exceeded as this will give rise to a high stress in the valve stem and/or cylinder neck.

Care shall be taken with aluminium alloy cylinders, for which valving torques are lower than for steel cylinders. Aluminium alloy cylinders shall not be valved at temperatures above ambient because, on cooling, differential contraction between the cylinder and the valve will give rise to a high stress in the cylinder neck.

High difference of temperature between cylinder neck and valve should be avoided. Some valve designs can be unsuitable to be valved at elevated temperatures (e.g. above 65 °C).

All tools and equipment used for valving cylinders shall be periodically validated for accuracy. Accuracy shall be established by measuring the torque applied to the valve of a valved cylinder as indicated in 5.4.3 for taper threads and in 6.5 for parallel threads.

NOTE Some machine tools rely on the friction between the valve and gas cylinder threads to stop the machine turning once the correct torque has been reached. For fast running machines, the inertia to be absorbed before the machine stops can result in valving torques being in practice far higher than the machine set point.

4 Preparation

4.1 Each valve and cylinder thread shall be examined to ensure that they are to the same dimensional standard, for example ISO 11363-1 or ISO 15245-1.

NOTE 1 Equivalent dimensional standards will make up the subject of the future ISO/TR 11364.

NOTE 2 Some standards require that valve and cylinder threads be identified by marking (e.g. ISO 10297 and ISO 13769).

4.2 The valve and cylinder threads shall be visually inspected for integrity and, where applicable, for damaged O-ring sealing surfaces. In particular, when valving aluminium alloy cylinders, the bottom threads on the stem of valves and the lower threads within the cylinder neck shall be fully formed at the root of the thread and free from ragged edges or burrs. Similar care is required when fitting stainless steel valves to all cylinders. Acceptance criteria for used valves are given in ISO 22434.

4.3 Threads and sealing surface on both valve and cylinder shall be checked for cleanliness. Any remnants of old PTFE sealing tape or other sealants, paints and other contaminants shall be completely removed. Care should be taken to prevent any debris falling into the cylinder. Depending on the gas service and application, before fitting the valve, it shall be ensured that the internal surface of the cylinder is clean and dry.

4.4 The top face of the cylinder, where a parallel thread is used, shall be free of paint, debris or other contamination so that the valve flange can rest directly on it when the cylinder has been valved.